

## ABSTRACT

A polarization measurement system and method that determines the polarization of a received signal within one received pulse. The polarimeter accepts series of samples representing horizontal and vertical signal components representing the polarization of a received signal. The samples are discrete time measurements, with each sample representing a magnitude separated in time by a predetermined angular resolution. The samples are combined with other samples in numerous sets of calculations operating in parallel, the various sets of calculations employing different transfer functions, so as to produce numerous series of output values. Characteristics of these series are examined to select a particular series, and thus select the transfer function which provided the series having a desired characteristic such as a best null. The parameters of the transfer function which provides the desired characteristic provide information representative of the signal polarization.

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